

Notes* on the areas of application and temperature recommendations** for thermoplastics

This table shows the ideal heating temperature for each type of plastic.
 * This information applies only to thermoplastic from Otto Bock HealthCare GmbH in Duderstadt, Germany.
 ** The temperatures specified here are only recommendations of Otto Bock HealthCare GmbH and must be adjusted for your individual heating devices.
 *** Thermolyn Pedilon must be heated in a water bath at 60 °C/140 °F.
 For more information, please consult the Ottobock Materials Catalogue (646K1=GB) and the Ottobock Technical Product Information – SKINGUARD Thermoplastics and Lamination Resins for Prosthetics and Orthotics (646D119=GB).

Application examples / Product names	Chemical composition	FO	Dynamic AFO	AFO	Nighttime splint	Test KAFO	KAFO	Orthosis strap	Wrist orthosis	Corset with pads (TLSO)	Prosthetic test socket	Soft sockets	Harmony socket	Definitive inner socket for lower limb prosthesis	Definitive inner socket for upper limb prosthesis	Special characteristics / Areas of application	Heating plate	Convection oven	Infrared oven
Thermolyn Pedilon 616T73	LTT polyester								•							ideal for clinical deployment mobile, thermoformable at low temperatures, ready for use on the body, eliminates the time-consuming tasks of fabricating casts and models, high adhesive strength, high restoring capacity when reheated	***		
Thermolyn Trolene 616T3	PE-LD						•	•	•							good transparency, good formability and flexibility, low molecular weight, especially suitable for orthosis components that require little stiffness, but high flexibility, suitable for fabrication of straps for sockets	125 °C / 267 °F	125 °C / 257 °F	125 °C / 257 °F
Thermolyn PP-C 616T120	PP-C		•	•	•		•	•	•							good stiffness, low weight, increased impact strength at low temperatures, low tendency to white crack, good shaping to orthotic joints, good welding characteristics, minor shrinkage, easy to dye with Ottobock thermoplastics	215 °C / 419 °F	185 °C / 365 °F	185 °C / 365 °F
Thermolyn PP-H 616T20, 616T56	PP-H	•	•	•			•	•	•							high strength and stiffness, high thermoplastic dimensional stability, reduced impact strength, easy to dye with Ottobock thermoplastics, especially suitable for highly stressed orthotic components, e.g. paralysis orthoses	215 °C / 419 °F	185 °C / 365 °F	185 °C / 365 °F
Thermolyn PE 200 616T19, 616T58, 616T60, 616T61, 616T95	PE-HD 200				•		•	•	•							hard polyethylene, good vacuum-forming capability, good welding characteristics, good sanding characteristics, easy to dye with Ottobock thermoplastics, minor shrinkage, can be combined with, e.g., Plastazote	180 °C / 356 °F	165 °C / 329 °F	165 °C / 329 °F
Thermolyn RCH 500 616T22, 616T43, 616T44	PE-HD 500				•		•									homogeneous thermoplastic material, high stiffness, sufficient welding characteristics, good heating characteristics, good adhesion properties, minor shrinkage, can be used with 501A33 Joint Screws and 505L1 Joint Bolts as an overlapped joint with orthosis bushings	195 °C / 383 °F	185 °C / 365 °F	185 °C / 365 °F
Thermolyn RCH 1000 616T16	PE-HD 1000	•														high-strength material, high abrasion resistance, requires high forces for deformation in a thermoplastic state, can also be reshaped when cold, shaping is facilitated through use of vacuum-forming devices with rubber membranes, frequently used as stiffening insoles for inner shoes	215 °C / 419 °F	195 °C / 383 °F	195 °C / 383 °F
Thermolyn soft (PE-C), black 616T690	PE-C													•		high flexibility, low density for especially low weight, high tensile strength, odour-neutral, high surface quality, can be subsequently thermoformed, comfortable to wear, washable	–	130 °C / 266 °F	130 °C / 266 °F
Thermolyn Europlex 616T70	Polyamide	•														good transparency, smooth surface, low hardness at increased toughness, for fabrication of dimensionally stable components, inserts and pads for torso orthoses	–	135 °C / 275 °F	135 °C / 275 °F
Thermolyn PETG clear 616T83	Copolyester													•		very high impact strength, excellent vacuum-forming characteristics, outstanding socket adhesion, protects the liner, used as the first layer in a definitive socket, easy to put on with liner/soft socket, for example as part of the Harmony fitting	–	170 °C / 338 °F	160 °C / 320 °F
Thermolyn clear 616T83	Copolyester					•					•					good transparency, high impact strength, excellent vacuum-forming characteristics, reshaping possible upon heating, e.g. using a hot air gun, can be over-laminated to secure adapters, minor shrinkage, for fabrication of self-supporting test sockets and trial orthoses (for temporary use)	165 °C / 329 °F	165 °C / 329 °F	165 °C / 329 °F
Thermolyn rigid 616T52	Styrene-butadiene										•					high stiffness, high thermoplastic dimensional stability, high resistance to the formation of stress cracks, extremely high impact strength, good vacuum-forming characteristics, can be over-laminated to secure adapters, for fabrication of self-supporting test sockets (for temporary use)	–	170 °C / 338 °F	170 °C / 338 °F
Thermolyn soft (EVA), clear 616T53	EVA													•		high surface quality, can be subsequently thermoformed, comfortable to wear, readily washable, high shrinkage if cooling rate is too high, for fabrication of flexible inner sockets for lower limb prosthetics	–	160 °C / 320 °F	160 °C / 320 °F
Thermolyn soft (EVA), skin colour 616T69	EVA													•		translucent, high surface quality, can be subsequently thermoformed, comfortable to wear, readily washable, high shrinkage if cooling rate is too high, for fabrication of flexible sockets for upper limb prosthetics	–	160 °C / 320 °F	160 °C / 320 °F
Thermolyn supra soft (EVA) 616T59	EVA													•		comfortable to wear, readily washable, for fabrication of highly flexible transfemoral soft-walled inner sockets	–	155 °C / 311 °F	155 °C / 311 °F
Thermolyn supra soft plus Silicone 616T111	EVA with Silicone													•		very high flexibility, facilitates more comfortable socket brim design, high surface quality, comfortable to wear, good sanding characteristics, washable	–	150 °C / 302 °F	150 °C / 302 °F
Thermolyn flexible 616T39, 5Z3	Ionomer													•		prevent classic material for frame socketed insensitive to cold and damp plaster models, high surface quality, high dimensional stability, comfortable to wear, readily washable, minor shrinkage, for fabrication of flexible inner sockets for lower limb prosthetics	–	165 °C / 329 °F	165 °C / 329 °F
Thermolyn supra flexible 616T112, 616T113	EVA							•	•					•	•	high friction, permanently elastic, available in many different colours, dimensionally stable, easy, convenient processing	100–130 °C / 212–266 °F	100–120 °C / 212–248 °F	80–100 °C / 175–212 °F

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Antibacterial ThermoLyn PP-H 616T420	PP-H	•	•	•			•									high strength and stiffness, high thermoplastic dimensional stability, reduced impact strength, easy to dye with Ottobock thermoplastics, especially suitable for highly stressed orthotic components, e.g. paralysis orthoses	215 °C / 419 °F	185 °C / 365 °F	185 °C / 365 °F
Antibacterial ThermoLyn PE 200 616T495	PE-HD 200				•		•	•	•							hard polyethylene, good vacuum-forming capability, good welding characteristics, good sanding characteristics, easy to dye with Ottobock thermoplastics, minor shrinkage, can be combined with, e.g., Plastazote	180 °C / 356 °F	165 °C / 329 °F	165 °C / 329 °F
Antibacterial ThermoLyn PETG clear 616T483	Copolyester													•		very high impact strength, excellent vacuum-forming characteristics, outstanding socket adhesion, protects the liner, used as the first layer in a definitive socket, easy to put on with liner/soft socket, for example as part of a Harmony fitting	–	170 °C / 338 °F	160 °C / 320 °F
Antibacterial ThermoLyn clear 616T283	Copolyester					•					•					good transparency, high impact strength, excellent vacuum-forming characteristics, reshaping possible upon heating, e.g. using a hot air gun, can be over-laminated to secure adapters, minor shrinkage, for fabrication of self-supporting test sockets and trial orthoses (for temporary use)	165 °C / 329 °F	165 °C / 329 °F	165 °C / 329 °F
Antibacterial ThermoLyn rigid 616T252	Styrene-butadiene										•					high stiffness, high thermoplastic dimensional stability, high resistance to the formation of stress cracks, extremely high impact strength, good vacuum-forming characteristics, can be over-laminated to secure adapters, for fabrication of self-supporting test sockets (for temporary use)	–	170 °C / 338 °F	170 °C / 338 °F
Antibacterial ThermoLyn soft (EVA), clear 616T253	EVA													•		high surface quality, can be subsequently thermoformed, comfortable to wear, readily washable, high shrinkage if cooling rate is too high, for fabrication of flexible inner sockets for lower limb prosthetics	–	150 °C / 302 °F	150 °C / 302 °F
Antibacterial ThermoLyn soft (EVA), skin colour 616T269	EVA													•		translucent, high surface quality, can be subsequently thermoformed, comfortable to wear, readily washable, high shrinkage if cooling rate is too high, for fabrication of flexible sockets for upper limb prosthetics	–	150 °C / 302 °F	150 °C / 302 °F
Thermolyn EVA/LDPE SilverShield® 616T200	EVA/LDPE													•		flexible material, pleasant wearing characteristics and good compatibility with skin, low shrinkage due to pressed plastic, for fabrication of flexible inner prosthetic sockets	–	150 °C / 302 °F	150 °C / 302 °F
Pedilin SilverShield® 617S203	PE foam, closed-cell											•				non-perforated, density of 140 kg/m³, hardness approx. shore A 35, for fabrication of soft-walled inner sockets and redression helmets	–	130 °C / 266 °F	130 °C / 266 °F
Antibacterial Nora® Lunairmed 617S229	EVA copolymer, closed-cell	•	•	•	•		•				•			•		density of 80 kg/m³, hardness approx. shore A 18, good padding characteristics, highly elastic, good adhesion, good sanding characteristics, washable, for padding FOs, individual padding when indicated for heel spur, for fitting diabetics	120–130 °C / 248–266 °F	120–130 °C / 248–266 °F	–

SilverShield® is a registered trademark of North Sea Plastics, Nora® is a registered trademark of Freudenberg. Please note that the actual colours of the individual thermoplastics may differ from the colours shown in the table.